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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|-----------------|-------------|----------------------|------------------------|------------------|
| 10/090,054      | 03/01/2002  | Michael Fripp        | 2001-IP-004288 US1 USA | 6736             |

49431 7590 02/22/2007  
SMITH IP SERVICES, P.C.  
P.O. Box 997  
Rockwall, TX 75087

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| EXAMINER |
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STEPHENSON, DANIEL P

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3672

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 02/22/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/090,054

Applicant(s)

FRIPP ET AL.

Examiner

Daniel P. Stephenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/26/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16 and 56-111 is/are pending in the application.
- 4a) Of the above claim(s) 72-96 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 56-71 is/are allowed.
- 6) ☒ Claim(s) 97,98,105,106,110 and 111 is/are rejected.
- 7) ☒ Claim(s) 99-104 and 107-109 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/9/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Newly submitted claims 72-96 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: it lacks the piston that is part of previously elected species I (elected in the action of 11/12/04).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 72-96 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 97, 98, 104-106, 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burleson et al. in view of Yezerky et al. Burleson et al. (Fig. 4A and 4B, col. 8 line 54- col. 9 line 49) discloses a downhole firing tool in which there is a housing (94), a piston (104), and a transitional material (122). The transitional material is disposed within the housing and can be made to block flow. When the transitional material blocks flow it impedes movement of the piston. Total blockage of the flow stops the piston while partial blockage due to the fluid will slow movement of the piston, as is the nature of transitional materials. The firing tool is attached to a perforating gun. Burleson et al. does not disclose that the transitional fluid is an MR fluid nor does it disclose a magnetic assembly to activate the MR fluid. Yezerky

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et al. (Fig 2, col. 3 lines 25-41) discloses a control for an MR fluid in which there are two ways of controlling the fluid. The first way is through the use of both a permanent magnet and an electromagnet, and the second is through the use of just an electromagnet. In the first system, the permanent magnet supplies a magnetic force to solidify the MR fluid in the unpowered state in which the magnetic field acts substantially perpendicular to pressure gradient. The electromagnet, when activated, will counter the magnetic force of the permanent magnet and allow the MR fluid to become fluid. In the second system the electromagnet is turned on or off to supply the magnetic force. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the activation system and MR fluid of Yezerky et al. with the apparatus of Burleson et al. This would be done to allow activation of the apparatus from the top of the borehole with a more reliable system that is electrically based as opposed to temperature based.

***Allowable Subject Matter***

4. Claims 16, 56-71 are allowed.
5. Claims 99-103 and 107-109 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brown et al. shows similar features to those of the present invention.

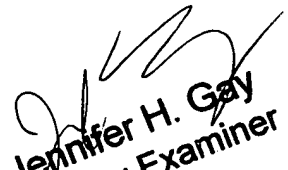
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P. Stephenson whose telephone number is (571) 272-7035. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

DPS 

  
Jennifer H. Gay  
Primary Examiner